

No warning signal is provided as to when the filter is approaching the end of its life. Applicants on the other hand provide:

“—providing a warning when a first portion of the maximum allowable pressure drop is reached—”

Scheufler, et al only uses a warning light to indicate that system is necessary. See col. 11, lines 26-32. Applicants on the other hand provide:

“—preventing the use of the spray gun when a second portion, greater than the first portion, of the maximum allowable pressure drop is reached—”.

Thus there is no teaching of the critical steps as outlined above as Applicants claim 6 sets forth.

The patent to Reighard, et al., is primarily concerned with maintaining proper airflow in a powder coating booth. When the filters become clogged with powder, a pressure surge is applied to “knock” the powder off the filters. Referring to Figure 1 of Reighard, et al., the nozzles 66A and 22B are located over the filters 58 and are used to provide the pulsing air. This powder is then collected for reuse. Thus the filters are not replaced, but only cleaned.

Applicants believe that the Examiner has misinterpreted Figure 6. Figure 6 is a graph of the total pressure verses fan speed. The  $Q_1$ ,  $O_2$  and  $O_3$  airflow curves are linear approximations of non-linear curves. The knee pressure points are just a change point between the two linear portions of the plot. They are not initial starting points for a new filter.

The whole purpose of the Reighard, et al. invention is to continually adjust the fan speed so that a substantially constant air flow is maintained in the coating chamber (See Col. 121, lines 20-28). **Furthermore, Col. 11 lines 64 through Col. 12, line 28 does not discuss the concept of “determining the maximum allowable pressure drop across a filter by adding the**

initial pressure drop of the filter to the maximum allowable pressure drop.” What is discussed is the concept of determining the total pressure drop by adding fan plenum pressure  $P_{FP}$  to the pulse plenum pressure  $P_{PP}$  to obtain the total pressure  $P_T$ . The calculated total pressure  $P_T$  is used to calculate the required fan speed. It is an entirely different process. Reighard, et al is only interested in keeping a constant airflow rate in the chamber to insure proper powder coating conditions. The Examiner is directed Col 9, lines 21 to 26, Reighard, et al. wherein it states:

“In addition, the control system 22 can include a pulse on demand mode which is essentially a stand alone section of the controller 10 that includes a cartridge sequential pulsing circuit that includes a cartridge sequential pulsing circuit that sequences the opening and closing of the air pulse elements 66A and 66B whenever, a set pressure range is reached across the cartridge filters 58.”


Thus there is no need for a determination of the initial filter pressure drop, because there is never a need for replacement. Thus Reighard, et al. does teach away from Applicant's invention. It does not disclose Applicants' concept, nor does it make Applicants' invention obvious to one skilled in the art.

Finally, one with ordinary skill the art, combine the teachings of Reighard, et al. particle coating method with the spray coating system of Scheufler, et al. However, both are only concerned with keeping constant airflow in the coating chamber, whereas Applicants' invention is concerned with maximizing filter life. While measuring the pressure drop across a filter does prior to use is automatically accomplished with both Reighard, et al. and Scheufler, et al. there is no teaching of adding this value to the allowable pressure

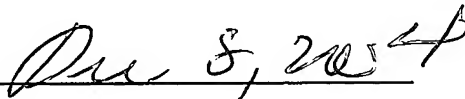
**drop across the filter as Applicants do, This critical step is not mentioned in either reference.**

The rejections having been overcome, it is believed that the rejection under 35 U.S.C. 103 (a) should now be withdrawn. The Examiner's concurrence is solicited along with a request that the Notice Of Allowance be issued.

Respectfully submitted;

  
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Louis L. Dachs

  
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